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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,472	12/12/2003	Barbanti Giovanni	S2205-72133	2474
32009	7590	08/30/2005		EXAMINER
BRADLEY ARANT ROSE & WHITE LLP 200 CLINTON AVE. WEST SUITE 900 HUNTSVILLE, AL 35801				GARBER, CHARLES D
			ART UNIT	PAPER NUMBER
				2856

DATE MAILED: 08/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/735,472	GIOVANNI, BARBANTI	
	Examiner Charles D. Garber	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 12 December 2003.

2a)  This action is **FINAL**.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-13 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5)  Claim(s) \_\_\_\_\_ is/are allowed.  
6)  Claim(s) 1-4 and 6-13 is/are rejected.  
7)  Claim(s) 5 is/are objected to.  
8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_\_.  
\_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 6, 7, 9, 10, 11, 12 and 13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claim 7, the claim recites "a first gasket and a second gasket are used to prevent the connection between the chamber and the chamber". It is not understood how gaskets may prevent connection between a chamber and itself without undue experimentation.

As for claim 9, the claim recites "the chamber is delimited by the diaphragm, the closure member and the gasket, the chamber communicating with the atmosphere through a hole, a chamber, the passage, the chamber and the chamber at environmental pressure." Claim 1 from which claim 9 depends originally defined only one chamber, the "tire chamber". With no other explanation this is taken to mean the chamber of a tire or the interior of the tire from which this device protrudes. This conflicts with the chamber now being delimited by the diaphragm (for which there is no antecedent description), the closure member and the gasket (for which is also no

antecedent description). Furthermore, the claim also seems to either define further chambers or repeats a description of the same chambers in the recitation “the chamber communicating with the atmosphere through a hole, a chamber, ... the chamber and the chamber at environmental pressure.” Examiner cannot determine if there are additional chambers or if the claim is describing other aspects of the same chamber. Examiner considers one of ordinary skill would not be able to make use of the device as described without undue experimentation.

Examiner is unable to examine claim 9 on the merits.

As for claim 10, the claim recites “a spring is further provided acting on the closure member with a pre-load defined during the montage of the device.” The term “montage” is defined by Merriam-Webster Online Dictionary as

“1 : the production of a rapid succession of images in a motion picture to illustrate an association of ideas

2 a : a literary, musical, or artistic composite of juxtaposed more or less heterogeneous elements b : a composite picture made by combining several separate pictures

3 : a heterogeneous mixture : JUMBLE <a montage of emotions>”

Examiner does not consider one of ordinary skill in the art would know how to define preload during **montage** of the device without undue experimentation.

Examiner is not able to examine this claim on the merits.

As for claim 13, the claim recites “a passage connects the downwards portion of the gasket with respect to the chamber to the chamber”. The disclosure drawings

indicate a plurality of passages, gaskets and chambers. The claim language however does not guide one of ordinary skill in the identification of any of these nor does the language of the claim guide one of ordinary skill in determining how any of the passages may connect a downwards portion of any of the gaskets "with respect to a chamber to a chamber". One is left wondering what this claim is intending to instruct.

The claim also recites "the gas of the chamber reaches the atmosphere since it is subject to the pressure losses". Examiner cannot determine what "it" is.

Immediately following this recitation is another explaining "therefore, the pressure in the chamber reaches a value higher than the atmospheric one". It is not apparent how this function may necessarily derive from the preceding structural limitations.

Furthermore, it is not understood how "communicating with the atmosphere through passages in series with environmental pressure" will necessarily cause "adjusted pressure losses".

Examiner is unable to examine this claim on its merits.

As for claim 11, the claim recites "spring is pre-loaded by an adjusting screw during the adjusting phase after the montage."

Examiner does not consider one of ordinary skill in the art would know how to pre-load by an adjusting screw during the adjusting phase after the **montage** without undue experimentation.

For purposes of further examination Examiner will read the claim only to include an adjusting screw that may preload the spring.

As for claim 6, the claim recites “the other springs of the plurality push on the first one.” It is not precisely known what there is a “plurality” of and what the “first one” is. One cannot determine what these unknowns are without undue experimentation.

Examiner is unable to examine this claim on its merits.

As for claim 12, the claim recites “a cylindrical self-closing closure member housed in the hole is pushed by the spring against the gasket to define a sealing and separate the chamber from the chamber when the movable closure member is unloaded”.

Examiner is unable to determine if the “cylindrical self-closing closure member” is a further definition of the “closure member” defined in claim 1 or a separate item. Likewise the “movable closure member”. Furthermore, it is not understood how one can separate the chamber from itself without undue experimentation.

Examiner is unable to examine this claim on its merits.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6, 7, 8, 9, 11, 12 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 recites the limitation “the envelope”, “the wall distal from the tire”, “the gasket”, “the group”, “the diaphragm”, “the end of the housing of the group” and “the axial canalization”. There is insufficient antecedent basis for these limitation in the claim.

Due to the extent of limitations lacking antecedent basis combined with the 35 U.S.C. 112, first paragraph issues also associated with this claim Examiner is unable to examine claim 7 on the merits.

Claim 8 recites the limitation "the end of the housing of the group". There is insufficient antecedent basis for this limitation in the claim.

Claim 9 recites "the diaphragm", "the gasket" and "the passage". There is insufficient antecedent basis for these limitations in the claim.

Claim 13 recites the limitation "the downwards portion of the gasket". There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites "the adjusting phase" and "the montage". There is insufficient antecedent basis for these limitations in the claim.

Claim 6 recites "the other springs", "the plurality" and "the first one". There is insufficient antecedent basis for these limitations in the claim.

Claim 12 recites "the hole", "the gasket" and "the movable closure member". There is insufficient antecedent basis for these limitations in the claim.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Barbanti (PCT International Publication Number WO 99/61264).

Regarding claim 1, Barbanti discloses a device signaling the inflation condition of a tire including a closure member (valve core 7) in equilibrium under the force due to the pressure of the tire chamber acting on a side and the force due to the environmental pressure together with the force of springs (lamina 18 or springs 8, 9) on the other side, the section of the closure member on which the pressure and springs forces act, determines the pressure value inside the tire chamber capable of upsetting the equilibrium of the forces with a pressure value lower or identical than a preestablished threshold as in the instant invention.

The tire interior inherently defines a chamber.

As for claim 2. System as in claim 1, wherein the elastic push of the springs determines the pressure value inside the tire chamber capable of upsetting the equilibrium of the forces with a pressure value lower or identical than a pre-established threshold.

As for claim 4, a Belleville washers is a “disk spring that applies pressure to the connection once you clamp down on it with the proper amount of force. The advantage of this washer is that it applies clamping pressure along a continuous arc pattern, instead of concentrating it at one point the way a split-ring lockwasher does” (from [http://www.ecmweb.com/mag/electric\\_belleville\\_washers\\_correctly/](http://www.ecmweb.com/mag/electric_belleville_washers_correctly/)). Lamina 18 appears to fit the definition of a Belleville washer.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barbanti (PCT International Publication Number WO 99/61264).

Regarding claim 3, the Barbanti reference does not teach a plurality of springs is provided, located in series and/or in parallel to define the full elastic forces co-operating to the equilibrium of the forces acting on the closure member.

Examiner takes Official Notice that it is widely known in the art to stack Belleville springs (washers) in series (in other word, inverted against each other) and in parallel (in other words, nested) in order to adjust both the amount of spring deflection and spring force to a desired level.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to stack Belleville springs in series and/or in parallel to achieve a wide range of desired spring deflection and spring force values using a single type of device. This would be useful for producing a tire indicator with different pressure response corresponding to different type of tires.

As for claim 11, Barbanti does not teach the spring is pre-loaded by an adjusting screw.

Examiner takes Official Notice that it is widely known in the art to adjust a spring in a pressure device with an adjusting screw.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide an adjusting screw in order to make fine adjustments of the spring in order to calibrate it to desired threshold pressure.

***Allowable Subject Matter***

Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 5, the Barbanti reference Belleville type washer (lamina 18) rests its external perimeter on the external part of a plate (plunger 11) as in the instant invention but the washer or lamina has no internal perimeter and when loaded no part of the washer rests on the internal part of the plate but instead on valve portion 22.

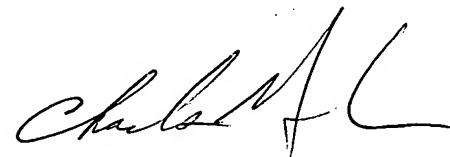
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles D. Garber whose telephone number is (571) 272-2194. The examiner can normally be reached on 6:30 a.m. to 3:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cdg



**CHARLES GARDER**  
**PRIMARY EXAMINER**